Image 14 → M

Tag data element T 10	Structural data element S 12

Quants/Letters 34

12 ↓

Suppose S is a string 001111011011,

if quantization parameter $m_1 = 3$, then alphabet $AV_1 = \{001, 111, 011, 011\}$ (46)

if quantization parameter $m_2 = 4$, then alphabet $AV_2 = \{0011, 1101, 1011\}$ (46)
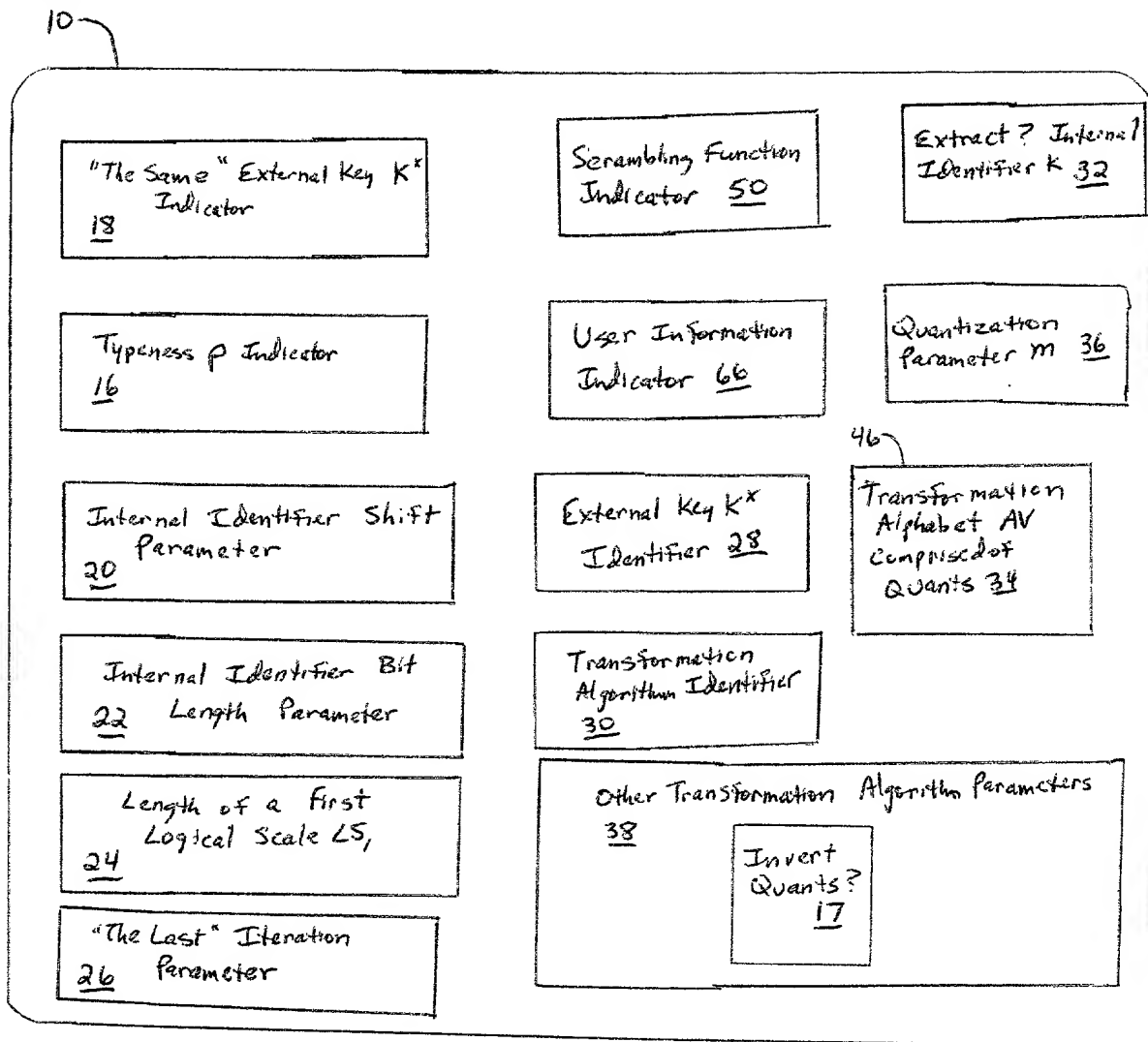
FIGURE 1

Tag data element 10

"The Same" External Key K^x Indicator 18	Scrambling Function Indicator 50	Extract? Internal Identifier K 32
Typeness ρ Indicator 16	User Information Indicator 66	Quantization Parameter m 36
Internal Identifier Shift Parameter 20	External Key K^x Identifier 28	Transformation Alphabet AV Comprised of Quants 34 (46)
Internal Identifier Bit Length Parameter 22	Transformation Algorithm Identifier 30	
Length of a First Logical Scale LS_1 24	Other Transformation Algorithm Parameters 38 — Invert Quants? 17	
"The Last" Iteration Parameter 26		

FIGURE 2

$AV'_n \in AV_n$, where n = 1,2,...,P **13**

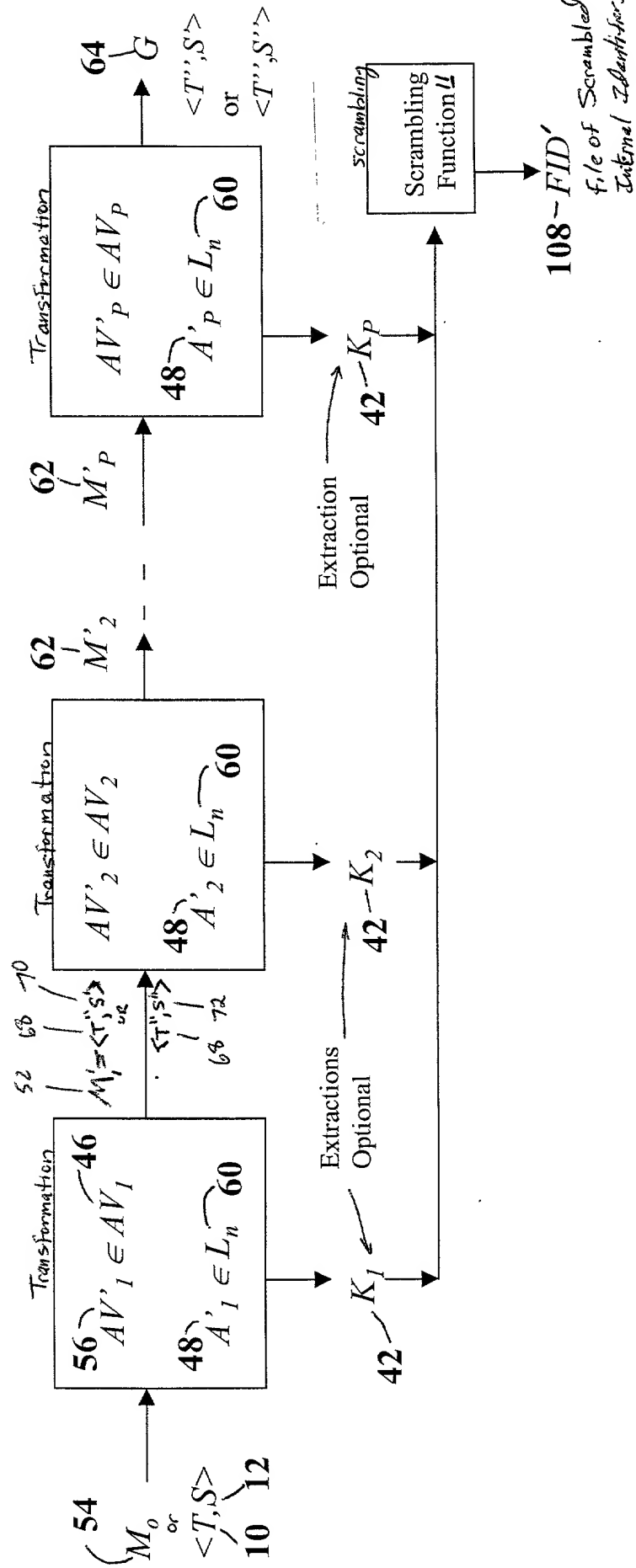$AV'_n = f\{m_n, M_n\}$, where m is quantization parameter

Figure 3

FIGURE 4

Initial Binary Sequence

Form $M_n (= \langle T, S \rangle)$ — 74

Select Number of Conversion Function Iterations P — 76

Internal Identifier K Extraction Determination — 78 (optional)

(optional)

Criteria Present? **80**

YES → Define m, A, AV per statistics and/or computations ex: final Image G File size — **82** (optional)

NO → Select m, A, AV Stochastically — 84

Counter Statistics — 86

Insert User Info? **88** (optional)

YES → Insert User Info Into S — 90 (optional)

NO →

Transform M_n to form Logical Scales LS_i — **92**

Form Transformed Structural Element S' ($\langle LS_1, LS_2, \ldots \rangle$) **94**

Select Internal Identifier K Bit-Length and Shift Parameters **96** (optional)

Scramble Internal Identifier K with Scrambling Function to Obtain K' **98** (optional)

Form Tag Data Element T **100**

Code Tag T to Obtain Partially Coded Tag Data Element T' — **102** (optional)

104 (optional)

Extract Internal Identifier? K

YES → (optional) 106 → Extract K from $\langle T', S' \rangle$

NO → Select External Key K^X **110**

Store: K in file FID (no scrambling embodiment) OR K' in file FID' (with scrambling embodiment) — 108 (optional)

Code T' with K^X to obtain coded Tag Data Element T'' **112**

Form M_{n+1} **114** ($\langle T'', S'_{cas}'' \rangle$)

P^{th} Iteration? **116**

YES → Encrypted Final Image G

NO →

Receiver/Subscriber 126

Computer 128

Memory Element 130

Process steps

Processor 132

$K_{INIT}, K'_{EXT},$ 134
$G,$ 64
FID_{RC}, FID'_{RC} 138
136

FIGURE 5